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ABSTRACT

This autoinstructional lesson deals with the study of such drugs as marijuana and LSD, with emphasis on drug abuse. It is suggested that it can be used in science classes at the middle level of school. No prerequisites are suggested. The teacher's guide lists the behavioral objectives, the equipment needed to complete the experience and suggests approximately 26 minutes for its completion. The script suggests various questions for discussion to facilitate the students' mastery of this learning task. (EB)

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DRUG EDUCATION

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TEACHER'S GUIDE

PACKET NUMBER	613.8 S
SUBJECT	Science
TITLE	Drug Education
LEVEL	Middle
PREREQUISITES	None
BEHAVIORAL OBJECTIVES	The student will be able to: 1. Identify and label 3 drugs. 2. Will give descriptive statements explaining the abuses of these drugs.
EQUIPMENT	Teacher's guide Script 3 Pictures 12 Slides, Slide projector Cassette tape, recorder
TIME	26 minutes
SAMPLE EVALUATION	Work sheet
SPACE REQUIRED	Carrel
BIBLIOGRAPHY	Teaching About Drugs, Pharamaceutical Manufactures Assoc., Ohio, 1971. Resource book for drug abuse education, National Clearinghouse for Mental Health information, National Institute of Mental Health, Chevy Chase, Md. 20015

SCRIPT

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This is a technique AT which will guide you to understand the abuses of drugs.

Let us take a look at SLIDE #1. (Pause) What do you see there? (Pause) It is weed, marijuana. Do you know the story of marijuana? It is called pot, hay, tea, grass, joint, weed, Mary Jane, reefer, stick, hemp, rope, green, joy and perhaps a dozen other names by the smokers. Look at SLIDE #2. It is a marijuana plant. (Mexican variety) SLIDE #3 shows the flowering tops of marijuana plant. (Mexican variety) SLIDE #4 shows young marijuana plant.

Marijuana is a drug found in the flowering tops and leaves of the female Indian hemp plant, Canabis. The plant grows in mild climates around the world, especially in Mexico, Africa, India and Middle East countries, especially Turkey. It also grows in the United States. Could marijuana grow in Alaska? (Pause) No. Why not? Think about it.

Marijuana is one of the least understood of all natural drugs, although it has been known for nearly 5,000 years. According to the United Nations survey, it has been widely used in Asia and Africa. Very early in history the Chinese used it to relieve pain during surgery and the people in India used it as a medicine. Today it is used mainly for its intoxicating effect and has no known use in modern medicine.

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How widely is it used in the United States? (Pause) The use of marijuana as an intoxicating drug was introduced in the United States in 1920. In 1937, the Marijuana Tax Act prohibited its use in the United States and it was outlawed. In the mid-sixties it was reported that there was a wider use of marijuana, and a lot of arrests have been made according to the President's Commission on Law Enforcement and Administration of Justice.

No one knows the exact extent of marijuana use in the United States. Some health authorities believe that 4 to 5 million Americans may have used it at least once in their lives. Others estimate that 20 million may have used it.

How does this drug work? (Pause) When smoked, marijuana quickly enters the blood stream and acts on the brain and nervous system. It affects the users mood and thinking but medical science has not discovered just how the drug works in the body, what pathways it takes to the brain and how it produces its effects. Some scientists report that the drug accumulates in the liver, because it may cause hallucinations when taken in very large doses. It is classed as a mild hallucinogen.

Can you think of some physical effects of marijuana smoking? (Pause) The long term physical effects of marijuana are not known because no one has done the kind of research needed to learn the results of chronic use

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When I say chronic use, I mean continuous use. The obvious physical reaction include rapid heartbeat, lowering of the body temperature, and sometimes reddening of the eyes. See SLIDE #5. The drug also changes blood sugar, stimulates the appetite, and dehydrates the body. Users may get talkative, loud, unsteady or drowsy and find it hard to coordinate their movements.

The effect of drug is felt quickly, only 15 minutes after inhaling the smoke of the cigarette. Its effect can last two to four hours. The range of effects can vary from depression, to a feeling of excitement. Some users, however, experience no change of mood at all. The sense of time and distance of many users frequently becomes distorted. A minute may seem like an hour. Something near may seem far away.

Marijuana also affects judgement. A person using marijuana finds it harder to make decisions that require clear thinking, and he finds himself more responsive to other peoples suggestions. The drug has an adverse effect on any task that takes good reflexes and thinking. For this reason, it is dangerous to drive while under the influence of this drug.

Now let us talk about the latest findings on the drug. A lot of research is going on in this country and elsewhere in the world. The scientists have observed that by smoking one cigarette, the smoker feels excited

or silly. After an amount equal to four cigarettes, the users perception changes. Colors seem brighter and hearing seems keener. After using ten cigarettes, the user feels hallucinations, (seeing things that are not there); has illusions, (seeing or imagining shapes to objects that are not there). The users mood may swing from joy to extreme anxiety or vice versa.

There is one very important question which is being asked by the people. Is marijuana addicting? (Pause) Authorities now think that marijuana is not addicting but people develop dependency. See SLIDE #6. It is not a narcotic and doesn't cause physical dependence as does heroin or other narcotics. This means that the body does not become dependent upon it for its continuous use. A number of scientists think that the drug can cause psychological dependency, however, if it is taken requlary. All researchers agree that more knowledge of the physical, personal and social consequences of marijuana use is needed before more factual statements can be made.

Marijuana smoking can cause a lot of risks to the youngsters. Experts on the human growth and development point out that a more subtle result of drug abuse on the young person is its effect on his personality, growth, through a period of many changes, in transition to adulthood.

It can also be disturbing to a youngster who is already having enough trouble and task adjusting to life and establishing his values.

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Another reason for caution is the lack of scientific evidence to support statements reported by the students that the use of marijuana is "medically safe". It is hoped that more research which is under way, will tell us about the effects of marijuana use. Look at PICTURE #1. Do you think a pregnant mother should smoke marijuana? (Pause) Do you think it will affect the unborn baby? (Pause)

Now let us talk about the laws dealing with marijuana in the United States. The federal law describes and classifies it as narcotic. To have, give or sell marijuana in the United States is a felony. Federal laws and many state laws deal with the drug as severely as if it were a narcotic. One can get 10 years imprisonment for the first offense. State laws also control the illicit use of these drugs. For transfer, or sale of the drug, the first offense may bring 5 to 20 years of imprisonment. See SLIDE #7.

The National Institute of Mental Health is doing a lot of research on this subject.

Now, using the knowledge which you have just gained, answer the questions at the bottom of the last page. When you complete this, hand it over to your teacher.

Finished? O.K. If you have any questions, your teacher will be happy to answer them.

QUESTION SHEET

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1. Why do people smoke marijuana?

2. What are the harmful effects of prolonged use of marijuana?

3. If some of your friends smoke marijuana, how can you help them?

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This tape is on LSD. What is LSD? (Pause) Look at SLIDE #8. LSD is a powerful man-made chemical - a mind affecting drug. LSD is so powerful that a single ounce is enough to provide 300,000 average doses.

It is legally classified as hallucinogen - in simple terms as, mind affecting drug. A drug which affects the persons mind. LSD produces strong and bizarre mental reactions in people, and striking distortions in their physical senses, in what and how they see, touch, smell, and hear. Look at SLIDE #9 and #10. The drug is more harmful than any other drug known to mankind. This drug is illegal in the United States, yet it is unlawfully produced in the laboratories.

Why do people take LSD? (Pause) Can you find out any answer to it? (Pause) Reasons given by users for taking LSD include: "curiosity", "for kicks", "to understand better", or a "quest for religious or philosophical insights".

Recent surveys show that the popularity of the drug is dropping because of its very harmful effects.

What are its physical effects? (Pause) Can you think of some? (Pause)

An average dose of LSD amounting to a speck has an effect that usually lasts from about 8 to 10 hours. Users take it in capsule form or in a

sugar cube, cracker or cookies, or they can lick it off a stamp or other objects impregnated with the drug. It increases the pulse and heart rate. Look at SLIDE #11. (the experiments being done on rats) another slide showing the effect of the drug on the girl who has taken it. Look at SLIDE #12. It also causes a rise in the blood pressure and temperature, dilated eye pupils, shaking of the hands and feet, cold sweaty palms, a flushed face or paleness, shivering, chills with goose pimples, irregular breathing, nausea and loss of appetite.

The drug is not physically addicting in the way that narcotics are. That is, the body does not develop a physical need for LSD or physical sickness when it is withdrawn.

What are the psychological effects. (Pause) Can you think of some? (Pause) People who use LSD say that it has a number of effects. The first effects are likely to be sudden changes in their physical senses. Walls may appear to move, colors seem stronger and more brilliant. Users are likely to "see" unusual patterns unfolding before them. Flat objects seem to stand out in three dimensions. Taste, smell, hearing, and touch seem more acute. One sensory impression may be translated or merged into another For example, music may appear as a color and colors may seem to have a taste. Books may look like chairs and so on. One of the most confusing yet

common reactions among users is the feeling of two strong and opposite emotions at the same time. They can feel both happy and sad at once - relaxed and tense. Arms may feel both heavy and light at the same time. They also feel a sensation of losing the normal feeling of boundaries between body and space. Sometimes they feel they can fly or float with ease. Many deaths have occurred because while standing on a ten story building, they feel that they can fly and float and - have jumped, resulting in instantaneous death.

The effect of the drug varies at different times in the same individual That is why the users say that they had a bad trip at one time and a good trip another time. See PICTURE #2. Among LSD's other effects on the users are the loss of "sense of time". He does not know how much time is passing but he does remain conscious.

How does the drug affect thinking? (Pause) Scientists report that LSD users can reason logically, up to a point, while undergoing the drugs effects. He usually remembers after the drug wears off much of what happened to him. He may, for example, have become fascinated with an object in the room, like a chair or a vase. On larger doses, he may feel mystical and report a sense of rebirth or new insights, but he is often unable to explain his experience to others. Many medical authorities feel that chronic or continued use of LSD changes values and impairs the users power of concentration and ability to think. This may lead to a tendency to drop out of society.

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It is often said by users that LSD increases creativity. I want you to look at PICTURE #3. Four artists in Germany were asked to draw or paint, after a tiny dose of LSD. You can see how their paintings look. Their work is very poor and they have no clear concept of what they are painting.

How does the drug act? (Pause) Just how LSD works in the body is not yet known. But it seems to affect the levels of certain chemicals in the brain to produce changes in the brain's electricity.

Animal experiments with LSD suggest that the brain's normal filtering and screening out process becomes blocked, causing the brain to become flooded with unselected sights and sounds. Studies of chronic LSD users indicate that they continue to suffer from an overload of stimulations to their senses. Researchers believe this may explain the regular users inability to think clearly and to concentrate on a goal.

Is LSD dangerous? (Pause) What do you think? (Pause) Recent reports from hospitals in areas where LSD is used without close medical supervision warn of definite dangers.

These dangers include:

1. Panic - Because he can't stop the drug's action, the user may get panicky and fear that he is losing his mind.
2. Paranoia - He may become increasingly suspicious, feeling that

someone is trying to harm him or control his thinking. This feeling generally lasts 72 hours after the drug has worn off.

3. Recurrence - Days, weeks, or even months, after the individual has stopped using LSD the things he saw and felt while on the drug may recur and make him fear he is going insane.

4. Accidental death - Because the LSD user may feel that he can fly or float in the air, he may try to leap out of a high window or from other heights and fall to his death - or he may drive or walk in front of a moving car because he thinks he can't be harmed.

Does LSD cause birth defects? (Pause) What do you think? I mean on unborn babies. (Babies who are yet to be born). Several scientists have reported that the drug causes chromosomal defects. You know what chromosomes are? (Pause) Chromosomes are recipe ribbons for babies. I mean, who the babies will look like when they are born.

Until now I have been telling you about the bad effects of LSD. Let us see if this drug has any medical uses. The drug has been tested widely as a possible treatment for mental and emotional illnesses, and for alcoholism. In studies so far, it has failed to help the severely ill. But under controlled conditions, neurotics and alcoholics have made some improvement, according to investigators. The work is not complete yet, but follow-up studies indicate that these improvements are not always lasting. This drug is a valuable tool in biomedical research but its therapeutic value may be limited to special cases.

How does the law view LSD? (Pause) Do you know? Because LSD is a dangerous drug, when not used for research under medical supervision,

it is closely regulated by the Bureau of Narcotics and Dangerous Drugs. The law provides strict penalties for anyone who illegally produces, sells, possesses with intent to sell, or dispose of dangerous drugs like LSD. Conviction can bring a fine of $10,000 and/or imprisonment for up to five years. For persons over 18 years of age the imprisonment is 10 years - to 15 years.